

Pollution Prevention in Acquisition Contracting: **Frequently Asked Questions**

1. What is Pollution Prevention?

Pollution Prevention — commonly referred to as P2 — involves practices that reduce or eliminate the creation of pollution. This can be accomplished by a variety of methods. Common examples include, in order of preference, source reduction, material substitution, material reuse and in-process recycling.

2. Doesn't P2 only apply to hazardous material?

No. This is a common misconception. P2 encompasses all types of pollution to the environment: to the air, water, and the ground. It includes pollution from non-hazardous solid and liquid wastes as well as excess hazardous materials that may become hazardous waste. Additionally, pollution can come from noise/acoustic emissions. Furthermore, pollution may be from emissions of chemicals into the air and water. All of these emissions should be targeted for Pollution Prevention.

3. What type of materials and waste streams (by-products) should be eliminated or reduced?

The determination of which materials and waste streams to eliminate or reduce is unique to each program. All materials and waste streams in a program should be evaluated for environmental impact, (larger quantities released into the environment may have greater impact), and environmental, safety and occupational health (ESOH) risks (very toxic materials may have greater ESOH risks). Implementing the largest reduction in quantity and toxicity at the lowest program cost is key to success. As they apply to your specific program, consider materials and waste streams such as those on the attached Tables of [Suggested List of Targeted Chemicals/Materials](#) and [Additional By-Products to Minimize](#). These lists do not include everything that should be avoided, but serve as a starting point. This evaluation can be used as part of the determination in what materials and waste streams may be reduced or eliminated from your program.

4. How can I incorporate Pollution Prevention into my Statement of Work (SOW) and Statement of Objective (SOO)?

- Require a Hazardous Material Management Program ([HMMP](#)) Plan for the entire life cycle of the system.
- Comply with the prohibition on using Class I Ozone Depleting Substances.
- Minimize use of Class II Ozone Depleting Substances; if possible prohibit their use.
- Minimize use of EPA 17 Industrial Toxic Chemicals, Toxic Release Inventory Chemicals, and global warming substances.
- Include risk analysis requirements, such as MIL-STD-882 or a similar industry or DoD standard in the SOO or SOW.
- Where possible, avoid use of materials identified in the attached Tables of [Suggested List of Targeted Chemicals/Materials](#) and [Additional By-Products to Minimize](#).

5. What can I do in my Request for Proposal (RFP) to let the offerors know I am concerned about (ESOH) issues, and I am interested in their process for addressing them.

- In the RFP you can ask the offerors to explain their approaches to integrating ESOH into their systems engineering processes throughout the life cycle of the weapons system including: design, test, manufacturing, operation and maintenance, and disposal.
- You could assign it a weight commensurate to its importance to your program in Section M (Evaluation Criteria).
- You may also include requirements for HMMP and ESOH risk reduction deliverables.

6. Isn't P2 an add-on requirement that will cost my program money with very little return on my investment?

No, P2 is an integral part of the life-cycle cost/total ownership cost (TOC) and systems engineering. When properly evaluated, P2 opportunities with a positive return on investment should be considered for adoption to reduce TOC, along with other cost, schedule and performance considerations. Additionally,

P2 often is a prudent method to approach environmental compliance challenges and can reduce ESOH risk throughout the system. Investments in pollution prevention in terms of capital costs for new equipment at maintenance activities often have an economic payback in less than two years. For the largest return on investment, incorporate pollution prevention early in the acquisition process.

7. What if I cannot reduce or eliminate a particular polluting material or waste stream?

P2 is as much about good business practice as it is material elimination. If the material cannot be eliminated or reduced due to performance requirements, or it is economically infeasible (over the total life of the system) to replace the material, use the original material. As alternate technology becomes available, the PM shall replace hazardous materials in the system through changes in the system design, manufacturing, and maintenance processes, where technically and economically practical.

The important point is to appropriately document your attempts to reduce and/or eliminate, as required by Instruction, Executive Orders, and the law.

8. How do contracting and contract review activities support P2?

The contracting team should ensure that P2 requirements identified by the program office are in the contract in a consistent and enforceable manner throughout the life cycle of the weapon system.

Review activities are an excellent opportunity to learn what worked and what did not work. The lessons learned from repair, maintenance and operations of all programs, including legacy programs, are replete with P2 opportunities to save limited resources if they have a process in place such as P2 early in the acquisition process to help identify them. To take advantage of these P2 opportunities, appropriate contract requirements need to be in place to identify and implement them.

9. I manage an "ACAT III or IV" Program. Why should I implement P2?

The DoD Regulation 5000.2-R and SECNAVINST 5000.2B, require **all** ACAT program managers to have a P2 program. But the best reason, of course, is that implementing P2 makes good business sense.

10. I manage an in-service program. Why should I implement P2?

In-service programs, even those pre-dating DoD 5000.2-R, are **not** considered exempt from the DoD Regulation 5000.2-R requirements and are required to implement a P2 Program.

Case in point: The in-service, NIMITZ Class Carrier Program started full-rate production before the ESOH requirements under DoD 5000 series existed. The Office of the Inspector General (DoD IG) audited the program in 1999 and recommended that the NIMITZ Class Carrier Program comply with the ESOH requirements contained in DoD 5000.2-R, in particular P2, and the Navy agreed.

11. As a Ship Acquisition Program Manager (SHAPM), how do I encourage my Participating Managers (PARMs) to practice P2?

The Ship Project Directive (SPD) can be used to instruct the PARM to implement P2 actions.

12. Who do I go to for help?

- NAVSEA 00T: (202) 781-3358
- NAVSEA 00T Internet (<http://www.navsea.navy.mil/sea00tWWW/>)
- NAVSEA ESH Integration Program Manager's Guide* (<http://sea00t.navsea.navy.mil/>)
- *This information is not available outside of the NAVSEA Community.
- NAVSEA P2 Desktop Guide (<http://www.navsea.navy.mil/sea00tWWW/>)
- Defense Acquisition Deskbook (<http://www.deskbook.osd.mil/>)

Suggested List of Targeted Chemicals/Materials

1,1,1-Trichloroethane	Lithium Hydroxide
1,1,2-Trichloro,1,2,2-Triflouroethane	Manganese Compounds+
2-Methoxyethanol	Mercury*
2-Nitropropane	Methanol
4,4-Dimethylaniline	Methoxychlor (DMDT)
Acetone	Methyl Bromide
Acetylaminazo Benzene	Methyl Ethyl Ketone*
Alpha Naphthylamine	Methyl Isobutyl Ketone*
Aminobiphenyl	Methylene Chloride*
Aniline	Methylene bis (2-Chloroaniline)
Arsenic	Monoethanolamine
Asbestos	N-Butyl Alcohol+
Benzene*	Nickel*+
Benzidene	Nitrobiphenyl
Beryllium	Nitroglycerin+
Beta Naphthylamine	Nitric Acid+
Beta Propriolactone	Nitrosamine
Bromine	Nitrous Dimethylamine
Cadmium*	Paradichlorobenzene
Carbon Disulfide	Phenol
Carbon Tetrachloride*	Phosphoric Acid+
Chlorine	Polychlorinated Biphenyls
Chloroform*	Pyridine
Chromium+	Selenium
Copper & Copper Compounds+	Silver
DDT	Sodium Arsenate
Dichlorobenzidiene	Sodium Chromate
Dichloromethane+	Tetrachloroethane
Dimethylaminoazobenzene	Tetrachloroethylene*
Ethylene Dichloride	Tetraethyl Pyrophosphate
Ethylene Glycol	Toluene*
Ethylene Oxide	Toluene Diisocyanate
Ethyleneimine	Trichloroethylene*
Formaldehyde	Trichloroisocyanuric Acid
Hexachlorobenzene	Triorthocresylphosphate
Hydrazine	Vinyl Chloride
Hydrochloric Acid	Xylene*+
Hydrogen Cyanide*	Zinc Chromate
Lead*+	Zinc Compounds+

* EPA 17 Industrial Toxic Chemicals

+ NAVSEA-Reported Toxic Release Inventory (TRI) Chemicals in 1998

Note: The EPA SARA Title III List of Lists: a Consolidated List of Chemicals Subject to the Emergency Planning and Community Right-to-Know Act (EPCRA) and the Clean Air Act is located at <http://www.epa.gov/opptintr/chmlists.htm>.

Additional By-Products to Minimize

Air emissions of toxic pollutants	Hazardous waste
Air emission of other (criteria) pollutants	Solvents
Water/ground water discharges	Plastics
Solid waste	Rags
Noise pollution/acoustic emissions	Thermal pollution
Ultra violet radiation	Uniform National Discharge Standards (UNDS) related discharges

Notes:



NAVSEA Pollution Prevention Working Group
Naval Sea Systems Command (SEA 00T)
Office of Environmental Protection,
Occupational Safety and Health
1333 Isaac Hull Avenue, S.E. STOP 1210
Washington, DC 20376-1210
Commercial: (202) 781-3358
E-mail: Information00TNSSC@NAVSEA.NAVY.MIL
Revision 1: 20 July 2001